

### REMARKS

Applicant has carefully considered the matters raised by the Examiner in the outstanding Office Action but remains of the opinion that patentable subject matter is present. Applicant respectfully requests reconsideration of the Examiner's position based on the above amendments to the Claims and the following remarks.

→ A three-way Restriction was put forward and a telephone Election was made to Group I, Claims 1-13. Applicant hereby confirms his Election to Group I, Claims 1-13. This Election is made without traverse and, thus, Claims 14-19 are withdrawn from consideration at this time.

Claims 1-13 had been examined in the Office Action. This Response amends Claims 1, 3, 4, and 7. Claims 5, 8 and 9-13 have been cancelled. New Claims 20 and 21 have been added while Claims 2 and 6 remain unamended. Thus, under prosecution, are Claims 1-4, 6, 7, 20 and 21.

OK Claim 1 had been objected to for using the article "an" in line 6. Claim 1 has been amended on line 6 to delete the article "an" and to use the article "a", as suggested by the Examiner.

Claims 3-5, 9 and 11-13 had been rejected as being indefinite because of the use of the word "fine" to define the size of the particles, both organic and inorganic. In this amendment, the term "fine" has been deleted and the specific size of the particles have been inserted. For the organic particles, the size has been defined as 0.001 to 2  $\mu\text{m}$ . Support for this amendment can be found on page 31, lines 11 and 12. For the inorganic particle, its size has been defined as 0.02 to 0.1  $\mu\text{m}$ . Support for this amendment can be found on pages 35-36. It should be noted that the diameter of the inorganic particles is referring to the highest order particle diameter observed in the dry layer of the second porous layer.

The claims have been rejected based on three prior art references. Specifically, Claims 1-12 had been rejected as being anticipated by Hasegawa; Claims 1, 2, 6 and 11 had been rejected as being anticipated by Hirose; Claims 1-3, 5, 6, and 8-12 had been rejected as being anticipated by Ashida, and Claim ~~15~~<sup>13</sup> had been rejected as being unpatentable over Ashida.

It will be noted that the Claim 1 has been amended herein and those amendments include a number of limitations of Claim 13. Specifically, Claim 1 has been amended herein to recite a non water-absorptive support. This limitation was initially contained within Claims 5, 8 and 10 and, thus, Claims 5, 8 and 10 have been cancelled. Claim 1 has also been amended to recite that it

contains an ink absorptive layer and that the ink-absorptive layer is made of a first porous layer and a second porous layer. These limitations are contained in Claims 11 and 13 and, thus, Claims 11 and 13 have been cancelled.

The second porous layer is defined as being between the support and the first porous layer and the second porous layer is defined as having inorganic particles. These limitations were present in Claims 3 and 13 and, thus, Claim 3 is amended and, as noted, Claim 13 cancelled. Finally, Claim 1 has been amended herein to recite that the first porous layer has a thickness of not more than 20% of the thickness of the ink absorbing layer. This limitation came from Claim 13 and, as mentioned above, Claim 13 has been cancelled herein.

Claims 3, 4 and 7 have been amended herein because of the amendments made to Claim 1. Claims 20 and 21 have been added to pick up some of the limitations of Claim 13, namely, the thickness of the second porous layer is not less than 80% of the thickness of the ink absorbing layer and that the second porous layer can contain a binder. Respectfully, no new matter has been added by the amendments made herein.

In the Office Action, the Examiner recognizes that neither Hasegawa nor Hiroshi teach or suggest the limitations of Claim 13 and, specifically, that the first porous layer, or the outer layer, makes up less than 20% of the thickness of the ink absorbing layer. The Examiner had used Ashida to find that it would be obvious to one of skill in the art to arrive at the first porous layer having a thickness less than 20% of the overall thickness of the ink absorbing layer because Ashida, in his examples, teaches that the amount of the organic particle layer coated on the support is less than the amount of inorganic particle layer which is coated on the support. The Examiner went on to reason that the amount of material coated is equivalent to the thickness of the layer. Applicant respectfully disagrees.

First, the coating weight does not represent the thickness of the layer. The thickness of the layer can vary depending upon the coating conditions that are employed and, especially, the drying conditions which are employed. Such facts are known to those of skill in the art and, thus, one of skill in the art would not be led by the teachings of Ashida to forming a first coat, as recited in the claims of the instant Application, to be not more than 20% of the thickness of the overall ink absorbing layer.

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Even if, for arguments sake, such were true, the Examiner will recognize that the weights that are taught in each one of the examples of Ashida do not meet the percent recited in the claims. In Example 1, Ashida teaches that the organic particle layer is coated in an amount of 10 g/m<sup>2</sup> while the layer containing the inorganic particles is coated in an amount of 20 g/m<sup>2</sup>. Following the Examiner's reasoning, this would mean that the organic particle layer makes up 33% of the thickness.

Turning to Example 12 of Ashida, the organic particle layer is coated in an amount of 7 g/m<sup>2</sup> while the inorganic particle layer is coated in an amount of 17 g/m<sup>2</sup>. This means that the organic particle layer would make up about 29% of the thickness, if one were to follow the Examiner's reasoning that the thickness is directly proportional to the coating amount.

Finally, going over to Example 15 of Ashida, he uses 10 g/m<sup>2</sup> of the insoluble particle layer and 8 g/m<sup>2</sup> of the organic particle material. Following the Examiner's reasoning, Sample 15 teaches that the organic particle layer makes up about 56% of the thickness of the ink absorbing layer. In fact, if one were to follow the Examiner's reasoning, Example 15 teaches away from the present Invention because it is teaching that the organic particle layer is thicker than the inorganic particle layer.

Thus, it is respectfully submitted that Claim 1, as noted herein, is clearly patentable over the teachings of Hasegawa, Hirose and Ashida taken alone or in combination because neither Hasegawa, Hirose nor Ashida teach or suggest a first porous layer that includes the water insoluble organic particles where the thickness of the first porous layer is 20% or less than the thickness of the overall ink absorbent layer.

In the Office Action, the Examiner took the position that Formula (1) should be given no patentable weight because it was not a positive limitation. Applicant respectfully disagrees. The limitation of Formula (1) is used to define the properties of the ink jet recording sheet. Thus, an ink jet recording sheet not meeting the limitation of Formula (1), does not fall within the claims. Applicant respectfully submits that Formula (1) is a positive limitation and also submit that neither Hasegawa, Hirose nor Ashida, taken alone or in combination, meet the limitation of Formula (1).

It had also be stated in the Office Action, that the limitation of "capable of", as recited in Claims 3, 7 and 11, was not a positive limitation. Again, Applicant respectfully disagrees. The limitation, which follows the phrase "capable of", as recited in Claims 3 and 7, define the organic particle. In other words, if the organic particle cannot be dissolved in, or

swelled by a water soluble alcohol-type organic solvent as recited in Claims 3 and 7, then the organic particle does not fall within the gambit of Claims 3 and 7. Thus, it is submitted that the limitations in Claims 3 and 7, which require that the water insoluble organic particle be capable of dissolving or swelling in the specified water soluble alcohol-type organic solvent, are positive limitations and must be taken into account when determining whether the water insoluble organic particle meets the limitations of Claims 3 and 7.

Respectfully, the claims, as amended herein, are neither taught nor suggested by Hasegawa, Hirose, or Ashida, taken alone or in combination and, therefore, the claims, as presented herein, are patentable over Hasegawa, Hirose, and Ashida taken alone or in combination.

In view of the foregoing, it is respectfully submitted that the Application is in condition for allowance, and such action is respectfully requested. A one month extension of time is hereby requested and PTO Form 2038 is enclosed authorizing payment of the appropriate government extension fee. However, should any further fees or extensions of time be necessary in order to maintain this

Application in pending condition, appropriate requests are hereby made and authorization is given to debit Account # 02-2275.

Respectfully submitted,

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